CONTENTS, Volume 35

Number 1, March 1989

Microgeographical patterns of allozyme differentiation in Douglas-fir from southwest Oregon ..... *G. F. Moran and W. T. Adams* 3

Thinning red alder: Effects of method and spacing ..... *D. E. Hibbs, W. H. Emmingham, and M. C. Bondi* 16

An approach to the estimation of import price elasticities by supplier ..... *K. A. Blatner* 30

Disturbance-mediated accelerated succession in two Michigan forest types ..... *M. D. Abrams and M. L. Scott* 42

Estimating site index of Douglas-fir (*Pseudotsuga menziesii* [Mirb.] Franco) from ecological variables in southwestern British Columbia ..... *R. N. Green, P. L. Marshall, and K. Klinka* 50

Using N_2-fixing *Albizia* to increase growth of *Eucalyptus* plantations in Hawaii ..... *D. S. DeBell, C. D. Whitesell, and T. H. Schubert* 64

Perceived scenic beauty and contingent valuation of forest campgrounds ..... *T. C. Daniel, T. C. Brown, D. A. King, M. T. Richards, and W. P. Stewart* 76

Terrain shape index: Quantifying effect of minor landforms on tree height ..... *W. H. McNab* 91

Model fitting under patterned heterogeneity of variance ..... *T. G. Gregoire and M. E. Dyer* 105

Analytical estimates of loblolly pine tree center of mass and mass moment of inertia ..... *J. L. Fridley and R. A. Tufts* 126

Forest taxation and timber supply under price uncertainty: Perfect capital markets ..... *E. Koskela* 137

Forest taxation and timber supply under price uncertainty: Credit rationing in capital markets ..... *E. Koskela* 160

Considerations for throughfall chemistry sample-size determinations ..... *P. J. Edwards, P. Mohai, H. G. Halverson, and D. R. DeWalle* 173

Gains expected from clonal orchards under alternative breeding strategies ..... *P. P. Cotterill and N. Jackson* 183

Radial gradients in the specific gravity of wood in some tropical and temperate trees ..... *M. C. Wiemann and G. B. Williamson* 197

Application of growth models for simulating genetic gain of loblolly pine ..... *S. A. Knowe and G. S. Foster* 211

NOTES

Anthocyanins in autumn leaves of quaking aspen in Colorado ..... *K-G. Chang, G. H. Fechner, and H. A. Schroeder* 229

Use of sensitivity analysis to guide primary data collection efforts in the construction of "mongrel" input-output models ..... *M. S. Jamnick and J. K. Gilless* 237

Projections with ingrowth by Markov chains ..... *H. T. Valentine and G. M. Furnival* 245

Genetic variation among and within single-tree progenies of northern red oak ..... *T. E. Kolb and K. C. Steiner* 251

An alternative estimator for horizontal point clusters ..... *P. C. Van Duesen and J. M. Grender* 257

True separable costs versus accounting-based separable costs in multiple-use forestry ..... *J. G. Hof and R. C. Field* 263

Tree bucking for optimal stand value with log allocation constraints ..... *J. Sessions, E. Olsen, and J. Garland* 271

Number 2, June 1989

New compatible estimators for survivor growth and ingrowth from remeasured horizontal point samples ..... *F. A. Roesch, Jr., E. J. Green, and C. T. Scott* 281

Variable selection in dendroclimatology: An example using simulated tree-ring series ..... *M. J. Arbaugh and D. L. Peterson* 294

Inbreeding effective population size under some artificial selection schemes. II. Normal distribution of breeding values ..... *H. Kang* 303

Do one percent of the forest fires cause ninety-nine percent of the damage? ..... *D. Strauss, L. Bednar, and R. Mees* 319

Developing growth and yield models using dimensional analysis ..... *R. L. Amateis and M. E. McDill* 329

Predicting wood production by canopy trees in forest communities in the western Great Smoky Mountains .. *R. L. Callaway, E. C. Clebsch, and P. S. White* 338

Effects of costs, demand, and labor productivity on the prices of forest products in the United States, 1958–1984 ..... *J. Buongiorno and H-C Lu* 349

Development and evaluation of an expert system for diagnosing pest damage of red pine in Wisconsin ..... *D. L. Schmoldt and G. L. Martin* 364

Multiple-occasion partial replacement sampling for growth components ..... *P. C. Van Deusen* 388

A model of National Forest timber supply and stumpage markets in the western United States ..... *D. M. Adams and R. W. Haynes* 401

Selecting populations in tree breeding: An alternative to multiple comparisons .. *E. R. Falkenhagen and J. D. Gibbons* 425

Determinants of log-to-lumber conversion efficiency: A Washington case study . *P. A. Cardellichio* 437

The generation and fate of road-surface sediment in forested watersheds in southwestern Washington ..... *R. E. Bilby, K. Sullivan, and S. H. Duncan* 453

Root system structure in planted and seeded loblolly and shortleaf pine ..... *C. A. Harrington, J. C. Brissette, and W. C. Carlson* 469

Forest planning and decision making under fuzzy environments: An overview and illustration ..... *G. A. Mendoza and W. Sprouse* 481

Ecological implications of loblolly pine regeneration for small mammal communities ..... *M. T. Mengak, D. C. Guynn, Jr., and D. H. VanLear* 503

Interregional impacts of forest-based economic activity ..... *L. Teeter, G. S. Alward, and W. A. Flick* 515

Effects and adjustments of competition bias in progeny trials with single-tree plots ..... *S. Magnussen* 532

Systems of equations in forest stand modeling ..... *B. E. Borders* 548

Characterizing spatial patterns of gypsy moth regional defoliation ..... *A. M. Liebhold and J. S. Elkinton* 557

Growth, xylem pressure potential, and nutrient absorption of loblolly pine on a reclaimed surface mine as affected by an induced *Pisolithus tinctorius* infection ... *R. F. Walker, D. C. West, S. B. McLaughlin, and C. C. Amundsen* 569

Spectral characteristics of tree components of balsam fir and spruce damaged by spruce budworm ..... *D. G. Leckie, D. P. Ostaff, P. M. Teillet, and G. Fedosjevs* 582

Identifying NIPF management motivations with qualitative methods ..... *J. C. Bliss and A. J. Martin* 601

NOTES

Estimation of *Juglans Nigra* L. mating system parameters ..... *G. Rink, E. R. Carroll, and F. H. Kung* 623

Estimating and interpreting the variation in the local demand for stumpage ..... *G. A. Majerus, D. H. Jackson, and K. P. Connaughton* 628

Spatial and temporal variability of foliar nutrient levels in Fraser fir Christmas trees ..... *J. N. Hockman, J. A. Burger, and D. Wm. Smith* 632

Note on log sort yard location problems ..... *L. R. Broad* 640

BOOK REVIEWS

Fungal decomposition of wood: Its biology and ecology ..... *Reviewed by T. K. Kirk* 646

Genetic manipulation of woody plants ..... *Reviewed by J. P. van Buijtenen* 647

MANUSCRIPT REVIEWERS, 1988 649

Number 3, September 1989

A simple procedure for mapping tree locations in forest stands ..... *D. D. Reed, H. O. Leichty, and A. J. Burton* 657

Spatial stochastic modeling of growth and forest resource evaluation ..... *J. S. Samra, H. S. Gill, and V. K. Bhatia* 663

Height-age trends from an Arkansas seed source study..... *P. T. Sprinz, C. B. Talbert, and M. R. Strub* 677

Substitution in demand between sawnwood and other wood products in Norway ..... *A. Baudin and B. Solberg* 692

Stockability: A major factor in productivity differences between *Pinus taeda* plantations in Hawaii and the Southeastern United States..... *D. S. DeBell, W. R. Harms, and C. D. Whitesell* 708

Optimal tariffs on intermediate and final goods: The case of tropical forest products..... *J. R. Vincent* 720

Nonindustrial private forest landowners as timber marketers: A field study of search for market information and decision quality ..... *B. N. Rosen, H. F. Kaiser, and M. Baldeck* 732

Effects of chronic doses of ozone on loblolly pine: Photosynthetic characteristics in the third growing season ..... *T. W. Sasek and C. J. Richardson* 745

Price indexes for deflating public forestry research expenditures ..... *D. N. Bengston* 756

A production function analysis of loblolly pine yield equations ..... *C-M Liu, W. A. Leuschner, and H. E. Burkhart* 775

Regression estimators for late-instar gypsy moth larvae at low population densities ..... *W. E. Wallner, A. S. Devito, and S. J. Zarnoch* 789

Design efficiencies with planned and unplanned unbalance for estimating heritability in forestry... *B. G. McCutchan, G. Namkoong, and F. G. Giesbrecht* 801

Distance-dependent competition measures for predicting growth of individual trees ..... *M. Tomé and H. E. Burkhart* 816

Long-term effects of fertilization on stem form, growth relations, and yield estimates of slash pine ..... *E. J. Jokela, R. B. Harding, and C. A. Nowak* 832

DISCUSSION PAPER

Study of production functions for modeling forest biomass: An area for research ..... *J. C. Nautiyal and K. L. Belli* 843

Response to Study of production functions for modeling forest biomass: An area for research ..... *S. J. Chang* 850

Response to Study of production functions for modeling forest biomass: An area for research..... *D. D. Reed* 853

NOTES

Cumulative employment effects on northern California's wood products industries from national forest timber harvests ..... *J. Sullivan and J. Keith Gilless* 856

Nonsymbiotic biological dinitrogen fixation (actylene reduction) in an age sequence of slash pine plantations in north Florida ..... *J. F. DiStefano and H. L. Gholz* 863

Expert opinion estimation of fireline production rates..... *J. S. Fried and J. K. Gilless* 870

Number 4, December 1989

Biomass estimation methods for tropical forests with applications to forest inventory data ..... *S. Brown and A. J. R. Gillespie* 881

Genetic variance in growth of balsam poplar under 16- and 8-hour photosynthetic periods ..... *F. Schneckenburger and R. E. Farmer, Jr.* 903

Controls over net inorganic nitrogen transformations in an age sequence of *Pinus elliottii* plantations in North Florida..... *J. F. Distefano and H. L. Gholz* 920

Field performance of ponderosa, scots, and Austrian pines with *Pisolithus tinctorius* ectomychorrizae in prairie soils..... *J. W. Riffle* 935

Factors affecting the supply and demand of timber from private nonindustrial lands in Sweden: An econometric study..... *L. Hultkrantz and T. Aronsson* 946

A tree-ring reconstruction of western spruce budworm history in the southern Rocky Mountains ..... *T. W. Swetnam and A. M. Lynch* 962

Phenological and morphological responses of mesic and dry site sources of coastal Douglas-fir to water deficit.... *R. J. Joly, W. T. Adams, and S. G. Stafford* 987

Influence of disease management strategies on the production of white spruce in a forest tree nursery.... *S. E. Enebak, M. A. Palmer, and R. A. Blanchette* 1006

A model to predict the moisture content of reindeer lichen..... *G. Péch* 1014

Comparing basal area growth rates in repeated inventories: Simpson's paradox in forestry ..... *C. E. Thomas and B. R. Parresol* 1029

Iron, copper, and manganese complexation by forest leaf litter ..... *N Senesi, G. Sposito, and G. Bradford* 1040

Ecological species groups of oak ecosystems of southeastern Michigan ..... *L. Archambault, B. V. Barnes, and J. A. Witter* 1058

Endemic and epidemic populations of southern pine beetle: Implications of the two-phase model for forest managers ..... *W. D. Mawby, F. P. Hain, and C. A. Doggett* 1075

An economic analysis of harvest behavior: Integrating forest and ownership characteristics ..... *D. F. Dennis* 1088

NOTES

First-year growth of hybrid poplar shoots from cutting or coppice origin ..... *J. Bergez, D. Auclair, and L. Bouvarel* 1105

Red spruce rhizosphere dynamics: Spatial distribution of aluminum and zinc in the near-root soil zone..... *W. Smith and A. S. Pooley* 1114

Effects of goats on understory vegetation and fire hazard reduction in a coastal forest in California... *C. N. Tsiouvaras, N. A. Havlik, and J. W. Bartolme* 1125

1989 Index 1132

1989 Contents..... 1137